

ENHANCED TOUCH-SCREEN DISPLAY SYSTEM

ABSTRACT OF THE DISCLOSURE

5 An enhanced touch-screen display system is disclosed for
generating pixel coordinate estimates corresponding to a location on a display
screen touched by a user. The system is an analog resistive touch-screen
display system having a processor and associated software algorithms to allow
for the calibration and validation of pixel coordinate estimates as an integral
10 part of the real-time generation of the pixel coordinate estimates. Multiple
calibrated pixel coordinate estimates are generated and processed at a pre-
defined sampling rate to determine a valid pixel position to minimize sampling
delays due to settling times. The x-axis position is also validated before the
system attempts to generate a y-axis position to avoid the wasted time for
15 generating y-axis estimates when x-axis estimates are corrupted. Noisy
estimates are inherently reduced in the touch-screen display system by
providing shunts across certain drivers in the system that also allow for
detection of a "no touch" state.